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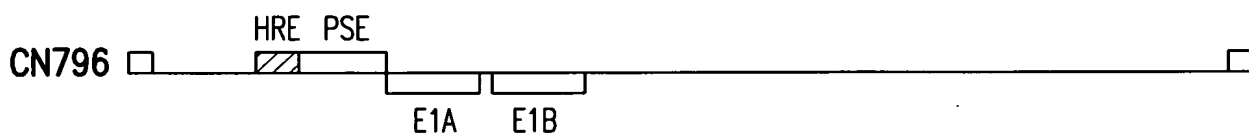


FIG.1



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gggccccaaa ttagcaagt accacgtggt tctgaagcca gtggcctaag gaccaccctt 61
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gcggggccgtg agcgtcatg

FIG.2



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FIG.3A



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FIG.3B



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FIG.3C



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ccccagcccc aagctt 5836

FIG.3D



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ggcaacccaa	agtccaaatc	caggtgagca	ggtgcaccaa	atgcccagag	atatgacgag	360
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ccagcctgtc	caggcccttc	cactctccac	tttgtgacca	tgtccaggac	caccctcag	1620
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FIG.4A



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FIG.4B



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FIG.4C



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gaccaagccc aggaccaatg tggaaggaag gaaacagcat cccctttagt gatggaaccc	5700
aaggctcagtg caaagagagg ccatgagcag ttaggaaggg tggccaacc tacagcacia	5760
accatcatct atcataagta gaagccctgc tccatgaccc ctgcatttaa ataaacgttt	5820
gttaaattgag tcaaattccc tcacatgag agctcacctg tgtgtaggcc catcacacac	5880
acaaacacac acacacacac acacacacac acacacacac acagggaaag tgcaggatcc	5940
tggacagcac caggcaggct tcacaggcag agcaaacagc gtgaatgacc catgcagtgc	6000
cctgggcccc atcagctcag agaccctgtg agggctgaga tggggctagg caggggagag	6060
acttagagag ggtggggcct ccagggaggg ggctgcaggg agctgggtac tgcctccag	6120
ggagggggct gcagggagct gggctactgc ctccaggag ggggctgcag ggagctgggt	6180
actgccctcc agggaggggg ctgcaggag ctgggtactg ccctccaggg agggggctgc	6240
agggagctgg gtactgccct ccagggaggc agggagcactg ttcccaacag agagcacatc	6300
ttcctgcagc agctgcacag acacaggagc cccatgact gccctgggccc aggggtgtga	6360
ttccaaattt cgtgccccat tgggtgggac ggaggttgac cgtgacatcc aaggggcatc	6420
tgtgattcca aacttaaact actgtgcta caaaatagga aataacccta ctttttctac	6480
tatctcaaat tccctaagca caagctagca ccctttaaat caggaagttc agtcaactct	6540
ggggtcctcc catgccccca gtctgacttg caggtgcaca ggggtggctga catctgtcct	6600
tgctcctcct cttggctcaa ctgcccgcct tcctgggggt gactgatggg caggacaagg	6660
gactctagag ctggcccat gattgacagg aaggcaggac ttggcctcca ttctgaagac	6720
taggggtgtc aagagagctg ggcattccac agagctgcac aagatgacgc ggacagaggg	6780

FIG.4D



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tgacacaggg	ctcagggctt	cagacgggtc	gggagggctca	gctgagagtt	cagggacaga	6840
cctgaggagc	ctcagtggga	aaagaagcac	tgaagtggga	agttctggaa	tgttctggac	6900
aagcctgagt	gctctaagga	aatgctccca	ccccgatgta	gcctgcagca	ctggacggtc	6960
tgtgtacctc	cccgtgccc	atcctctcac	agccccgcc	tctagggaca	caactcctgc	7020
cctaacatgc	atctttcctg	tctcattcca	cacaaaagg	cctctgggg	cctgttctg	7080
cattgcaagg	agtggaggtc	acgttccac	agaccacca	gcaacagggt	cctatggagg	7140
tgcggtcagg	aggatcacac	gtcccccat	gccagggga	ctgactctgg	gggtgatgga	7200
ttggcctgga	ggccactggt	cccctctgtc	cctgagggga	atctgcaccc	tggaggctgc	7260
cacatccctc	ctgattcttt	cagctgaggg	cccttcttga	aatcccagg	aggactcaac	7320
ccccactggg	aaaggccag	tgtggacggt	tccacagcag	cccagctaag	gcccttggac	7380
acagatcctg	agtgagagaa	cctttaggg	cacaggtgca	cggccatgtc	cccagtgc	7440
acacagagca	ggggcatctg	gaccctgagt	gtgtagctcc	cgcgactgaa	cccagccctt	7500
ccccaatgac	gtgaccctg	gggtggctcc	aggtctccag	tccatgccac	caaaatctcc	7560
agattgaggg	tcctcccttg	agtcctgat	gcctgtccag	gagctgcccc	ctgagcaa	7620
ctagagtgca	gagggctggg	attgtggcag	taaaagcagc	cacatttgtc	tcaggaagga	7680
aagggaggac	atgagctcca	ggaagggcga	tggcgtcctc	tagtgggcgc	ctcctgttaa	7740
tgagcaaaaa	ggggccagga	gagttgagag	atcagggctg	gccttggact	aaggctcaga	7800
tggagaggac	tgaggtgcaa	agagggggct	gaagtagggg	agtggtcggg	agagatggga	7860
ggagcaggta	aggggaagcc	ccagggaggc	cgggggaggg	tacagcagag	ctctccactc	7920
ctcagcattg	acatttgggg	tggctgtgct	agtggggttc	tgtaaattgt	aggggtgtca	7980
gcaccatctg	gggactctac	ccactaaatg	ccagcaggac	tcctcccca	agctctaaca	8040
accaacaatg	tctccagact	ttccaaatgt	cccctggaga	gcaaaattgc	ttctggcaga	8100
atcactgac	tacgtcagtc	tctaaaagt	actcatcagc	gaaatccttc	acctcttggg	8160
agaagaatca	caagtgtgag	aggggtagaa	actgcagact	tcaaaatctt	tccaaaagag	8220
ttttacttaa	tcagcagttt	gatgtcccag	gagaagatac	atttagagt	tttagagttg	8280
atgccacatg	gctgcctgta	cctcacagca	ggagcagagt	gggttttcca	agggcctgta	8340
accacaactg	gaatgacact	cactgggtta	cattacaaag	tggaatgtgg	ggaattctgt	8400
agactttggg	aagggaaatg	tatgacgtga	gccacagcc	taaggcagt	gacagtccac	8460
tttgaggctc	tcaccatcta	ggagacatct	cagccatgaa	catagccaca	tctgtcatta	8520

FIG.4E



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gaaaacatgt tttattaaga ggaaaaatct aggctagaag tgctttatgc tcttttttct 8580
ctttatgttc aaattcatat acttttagat cattccttaa agaagaatct atccccctaa 8640
gtaaatgtta tcaactgactg gatagtgttg gtgtctcact cccaaccctt gtgtggtgac 8700
agtgccttgc ttccccagcc ctgggccctc tctgattcct gagagctttg ggtgctcctt 8760
cattaggagg aagagaggaa ggggtgtttt aatattctca ccattcacc atccacctct 8820
tagacactgg gaagaalcag ttgccactc ttggatttga tcctcgaatt aatgacctct 8880
atttctgtcc ctgtgccatt tcaacaatgt gacaggccta agaggtgcct tctccatgtg 8940
atttttgagg agaaggttct caagataagt tttctcacac ctctttgaat tacctccacc 9000
tgtgtcccca tcaccattac cagcagcatt tggacccttt ttctgttagt cagatgcttt 9060
ccacctcttg aggggtgtata ctgtatgctc tctacacagg aatatgcaga ggaaatagaa 9120
aaagggaaat cgcattacta ttcagagaga agaagacctt tatgtgaatg aatgagagtc 9180
taaaatccta agagagccca tataaaatta ttaccagtgc taaaactaca aaagttacac 9240
taacagtaaa ctagaataat aaaacatgca tcacagttgc tggtaaagct aaatcagata 9300
tttttttctt agaaaaagca ttccatgtgt gttgcagtga tgacaggagt gcccttcagt 9360
caatatgctg cctgtaattt ttgttccttg gcagaatgta ttgtcttttc tccctttaa 9420
tcttaaattgc aaaactaaag gcagctcctg ggccccctcc ccaaagtcag ctgcctgcaa 9480
ccagccccac gaagagcaga ggcctgagct tccctggtea aaataggggg ctagggagct 9540
taaccttgct cgataaagct gtgttccag aatgtcgtc ctgttcccag gggcaccagc 9600
ctggaggggtg gtgagcctca ctggtggcct gatgcttacc ttgtgccctc acaccagtgg 9660
tcaactggaac cttgaacact tggctgtcgc ccgatctgc agatgtcaag aacttctgga 9720
agtcaaatta ctgcccactt ctccaggga gatacctgtg aacatccaaa accatgccac 9780
agaacctgc ctggggtcta caacacatat ggactgtgag caccaagtcc agccctgaat 9840
ctgtgaccac ctgccaagat gccctaact gggatccacc aatcactgca catggcaggc 9900
agcgaggctt ggaggtgctt cgccacaagg cagccccaat ttgctgggag tttcttgga 9960
cctggtagtg gtgaggagcc ttgggacct caggattact ccccttaagc atagtgggga 10020
cccttctgca tccccagcag gtgccccgt cttcagagcc tctctctctg aggtttaccc 10080
agacccctgc accaatgaga ccatgctgaa gcctcagaga gagagatgga gctttgacca 10140
ggagccgctc ttccttgagg gccagggcag ggaaagcagg aggcagcacc aggagtggga 10200

FIG.4F



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acaccagtgt ctaagcccct gatgagaaca ggggtggtctc tcccatatgc ccataccagg 10260
cctgtgaaca gaatcctcct tctgcagtga caatgtctga gaggacgaca tgtttccag 10320
cctaacgtgc agccatgccc atctaccac tgcctactgc aggacagcac caaccaggga 10380
gctgggaagc tgggagaaga catggaatac ccatggcttc tcaccttctt ccagtccagt 10440
gggcaccatt tatgcctagg acaccacct gccggcccca ggctcttaag agttaggtca 10500
cctaggtgcc tctgggaggc cgaggcagga gaattgcttg aaccgggag gcagagggtg 10560
cagtgagccg agatcacacc actgcactcc agcctgggtg acagaatgag actctgtctc 10620
aaaaaaaaag agaaagatag catcagtggc taccaagggc taggggcagg ggaagggtga 10680
gagttaatga ttaatagtat gaagtttcta tgtgagatga tgaaaatgtt ctggaaaaaa 10740
aaatatagtg gtgaggatgt agaataattg gaatataatt aacggcattt aattgtacac 10800
ttaacatgat taatgtggca tattttatct tatgtatttg actacatcca agaaacactg 10860
ggagagggaa agcccacat gtaaaataca cccaccctaa tcagatagtc ctcatgtac 10920
ccaggtacag gccctcatg acctgcacag gaataactaa ggatttaagg acatgaggct 10980
tcccagccaa ctgcaggtgc acaacataaa tgtatctgca aacagactga gagtaaagct 11040
gggggcacaa acctcagcac tgccaggaca cacacccttc tcgtggattc tgactttatc 11100
tgaccggcc cactgtccag atcttgttgt gggattggga caaggagggt cataaagcct 11160
gtccccaggg cactctgtgt gagcacacga gacctcccca cccccacc gttaggtctc 11220
cacacataga tctgaccatt aggcatgtg aggaggactc tagcgcgggc tcagggatca 11280
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tgaagccaca gatgggagaa gatggttcag gaagaaaaat ccagggaatgg gcaggagagg 11700
agaggaggac acaggctctg tggggctgca gccaggatg ggactaagtg tgaagacatc 11760
tcagcaggtg aggccaggtc ccatgaacag agaagcagct cccacctccc ctgatgcacg 11820
gacacacaga gtgtgtggtg ctgtgcccc agagtcgggc tctctgttc tggccccag 11880
ggagtgagaa gtgaggttga cttgtccctg ctctctctg ctacccaac attcaccttc 11940

FIG.4G



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tcctcatgcc cctctctctc aaatatgatt tggatctatg tccccgccca aatctcatgt 12000
caaattgtaa accccaatgt tggaggtggg gccttgtgag aagtgattgg ataatgcggg 12060
tggattttct gctttgatgc tgtttctgtg atagagatct cacatgatct ggttgtttaa 12120
aagtgtgtag cacctctccc ctctctctct ctctctctta ctcatgctct gccatgtaag 12180
acgttctctgt ttccccctca ccgtccagaa tgattgtaag tttctgagg cctccccagg 12240
agcagaagcc actatgcttc ctgtacaact gcagaatgat gagcgaatta aacctctttt 12300
ctttataaat taccagctct caggtatttc tttatagcaa tgcgaggaca gactaataca 12360
atcttctact ccagatccc cgcacacgt tagccccaga catcactgcc cctgggagca 12420
tgcacagcgc agcctcctgc cgacaaaagc aaagtcacaa aaggtgacaa aaatctgcat 12480
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cccgcggctg cccaggaat gaggcctcaa ccccagagc ttcagaaggg aggacagagg 13380
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cctcttgccc tccagggggg gacattgcac acagacatca ctcaggaaac ggattcccct 13560
ggacaggaac ctggctttgc taagggaagt gaggtggagc ctggtttcca tcccttgctc 13620

FIG.4H



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caacagaccc	ttctgatctc	tcccacatac	ctgctctgtt	cctttctggg	tcctatgagg	13680
accctgttct	gccaggggtc	cctgtgcaac	tccagactcc	ctcctggtac	caccatgggg	13740
aaggtggggg	gatcacagga	cagtcagcct	cgcagagaca	gagaccaccc	aggactgtca	13800
gggagaacat	ggacaggccc	tgagccgcag	ctcagccaac	agacacggag	agggaggggtc	13860
cccctggagc	cttccccaag	gacagcagag	cccagagtca	cccacctccc	tccaccacag	13920
tcctctcttt	ccaggacaca	caagacacct	ccccctccac	atgcaggatc	tggggactcc	13980
tgagacctct	gggcctgggt	ctccatccct	gggtcagtgg	cggggttggt	ggtactggag	14040
acagaggggt	ggtccctccc	cagccaccac	ccagtgcgac	tttttctagc	ccccagagcc	14100
acctctgtca	ccttcctgtt	gggcatcatc	ccaccttccc	agagccctgg	agagcatggg	14160
gagaccggg	accctgctgg	gtttctctgt	cacaaaggaa	aataatcccc	ctgggtgtgac	14220
agaccaagg	acagaacaca	gcagagggtca	gcactgggga	agacagggtg	tcctcccagg	14280
ggatgggggt	ccatccacct	tgccgaaaag	atttgtctga	ggaactgaaa	atagaaggga	14340
aaaaagagga	gggacaaaag	aggcagaaat	gagaggggag	gggacagagg	acacctgaat	14400
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tggaactcaa	gctcttctcc	acagaggagg	acagagcaga	cagcagagac	catggagtct	14580
ccctcggccc	ctccccacag	atgggtgcac	ccctggcaga	ggctcctgct	cacagggtgaa	14640
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ctgtgagacg	gacagagggc	tcctgttgga	gcctgaatag	ggaagaggac	atcagagagg	14760
gacaggagtc	acaccagaaa	aatcaaattg	aactggaatt	ggaaaggggc	aggaaaacct	14820
caagagttct	attttcctag	ttaattgtca	ctggccacta	cgtttttaaa	aatcataata	14880
actgcatcag	atgacacttt	aaataaaaac	ataaccaggg	catgaaacac	tgtcctcatc	14940
cgctaccgc	ggacattgga	aaataagccc	caggctgtgg	agggccctgg	gaacctcat	15000
gaactcatcc	acaggaatct	gcagcctgtc	ccaggcactg	gggtgcaacc	aagatc	15056

FIG.4I



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gaattcagaa ataggggaag gttgaggaag gacactgaac tcaaagggga tacagtgatt 60
ggtttatttg tcttctcttc acaacattgg tgctggagga attcccaccc tgaggttatg 120
aagatgtctg aacacccaac acatagcact ggagatatga gctcgacaag agtttctcag 180
ccacagagat tcacagccta gggcaggagg aactgtacg ccaggcagaa tgacatggga 240
attgcgctca cgattggctt gaagaagcaa ggactgtggg aggtgggctt tgtagtaaca 300
agagggcagg gtgaactctg attcccatgg gggaatgtga tggctctgtt acaaattttt 360
caagctggca gggaataaaa cccattacgg tgaggacctg tggagggcgg ctgccccaac 420
tgataaagga aatagccagg tgggggcctt tcccattgta ggggggacat atctggcaat 480
agaagccttt gagacccttt agggtaacaag tactgaggca gcaaataaaa tgaaatctta 540
tttttcaact ttatactgca tgggtgtgaa gatataattg tttctgtaca gggggtgagg 600
gaaaggaggg gaggaggaaa gttcctgcag gtctggtttg gtcttgtgat ccaggggggtc 660
ttggaactat ttaaattaaa ttaaattaaa acaagcgact gttttaaatt aaattaaatt 720
aaattaaatt ttactttatt ttatcttaag ttctgggcta catgtgcagg acgtgcagct 780
ttgttacata ggtaaacgtg tgccatgggtg gtttgcgtga cctatcaacc catcacctag 840
gtattaagcc cagcatgcat tagctgtttt tctgacgct ctccctctcc ctgactccca 900
caacaggccc cagtgtgtgt tgttccccct cctgtgtcca tgtgttctca ttgttcagct 960
cccacttata agtgagaaca tgtggtgttt ggttttctgt ttctgtgtta gtttgcgtgag 1020
gataatggct tccacctcca tccatgttcc tgcaaaggac gtgatcttat tcttttttat 1080
ggttgcatag aaattgtttt tacaaatcca attgatattg tatttaatta caagttaatc 1140
taattagcat actagaagag attacagaag atattaggtta cattgaatga ggaaatatat 1200
aaaataggac gaaggtgaaa tattaggtag gaaaagtata atagttgaaa gaagtaaaaa 1260
aaaatatgca tgagtagcag aatgtaaaag aggtgaagaa cgtaatagtg acttttttaga 1320
ccagattgaa ggacagagac agaaaaattt taaggaattg ctaaaccatg tgagtgttag 1380
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gtgaataaat agtagagaca tgtttgatgg attttaaaat atttgaaaga cctcacatca 1500
aaggattcat accgtgccat tgaagaggaa gatggaaaag ccaagaagcc agatgaaagt 1560
tagaaatatt attggcaaag cttaaattgtt aaaagtccta gagagaaaagg atggcagaaa 1620
tattggcggg aaagaatgca gaacctagaa tataaattca tcccaacagt ttggtagtgt 1680

FIG.5A



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gcagctgtag ccttttctag ataatacact attgtcatcac atcgcttaag cgagtgtaaa 1740
atggtctcct cactttatatt atttatatat ttatttagtt ttgagatgga gcctcgctct 1800
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tcaagtgatt ttcttacctc agcctcccca gtagctggga ttacaggtgc gtgccaccac 1920
acccggctaa tttttgtatt tttttagag acggggtttt gccatgttgg ccaggctggt 1980
cttgaactcc tgacatcagg tgatccacct gccttggcct cctaaagtgc tgggattaca 2040
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cttctatttg aaatacaggg ggcacatata taggattggt acatgggtat attgaactca 2160
ggtagtgatc atactacca acaggtagg tttcaacca ctccccctct tttcctcccc 2220
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ggccatgcag tattccatat tgcgtataga tcacattttc tttctttttt ttttttgaga 2460
cggagtcttg ctttgctgcc taggctggag tgcagtagca cgatctcggc tcaactgcaag 2520
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aacagtatat aagcattccc ttttctccac agctttgtca tcatggtttt ttttttctt 3060
tattttaaaa aagaatatgt tgttgttttc ccagggtaca tgtgcaggat gtgcaggttt 3120
gttacatagg tagtaaactg gagccatggt ggtttgctgc acctgtcaac ccattacctg 3180
ggtatgaagc cctgcctgca ttagctcttt tccctaagtc tctcactact gccccacct 3240
cacctgaca gggcaaacag acaacctaca gaatgggagg aaatttttgc aatctattca 3300
tctgacaaaag gtcaagaata tccagaatct acaagggaact taagcaaatt tttacttttt 3360

FIG.5B



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aataatagcc actctgactg gcgtgaaatg gtatctcatt gtgggttttca tttgaatttc 3420
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aagttcctta tagattctgg atattagact tcttattgga tgcatagttt gtgaatactc 3600
tcttccattc tgtaggttgt ctgtttactc tattgatggc ttcttttgct gtgccgaagc 3660
atcttagttt aattagaaac cacctgccaa tttttgtttt tgttgcaatt gcttttgggg 3720
acttagtcat aaactcttg ccaaggtctg ggtcaagaag agtatttctt aggttttctt 3780
ctagaatttt gaaagtctga atgtaaacad ttgcattttt aatgcattct gagttagttt 3840
ttgtatatgt gaaaggtcta ctctcatttt ctttccctct ttctttcttt ctttcttttc 3900
tttctttctt tctttctttc tttctttctt tctttctttc tttctttttg tcttcttttc 3960
tttctttctt tcttctttct tctctctttc tttttttttt ttgatggagt attgctctgt 4020
tgccaggtc gcagtgcagc ggcacgatct cggctcactg caacctctgc ctcttggtt 4080
caactgattc tctgcatca gccttccaag tagctgggat tataggcgcc cgccaccacg 4140
cccgactaat ttttgatttt ttagtagaga cgggggttgt ccatgttggc caggctggtt 4200
tgaaactcct gacctcaaac gatctgcctg ccttggcctc ccaaagtgt gggattacag 4260
gtgtgagcca ctgtgccag ccaagaatgt cattttctaa gaggtccaag aacctcaaga 4320
tattttggga ccttgagaag agaggaattc atacaggtat tacaagcaca gcctaattggc 4380
aaatcttttg catggcttg cttcaagact ttaggtctt aaaagtcgaa tccaaaaatt 4440
tttataaaag ctccagctaa gctaccttaa aaggggctg tatggctgat cactcttctt 4500
gctatacttt acacaaataa acaggccaaa tataatgagg ccaaaattta ttttgcaaat 4560
aaattgggtc tgctatgatt tactcttggg aagaacaggg aaaatagaga aaaatttaga 4620
ttgcattctga cttttttttc tgaattttta tatgtgccta caatttgagc taaatcctga 4680
attattttct ggttgcaaaa actctctaaa gaagaacttg gttttcattg tcttcgtgac 4740
acatttatct ggctctttac tagaacagct ttcttgttt ttgtgttcta gcttgtgtgc 4800
cttacagttc tactcttcaa attattgtta tgtgtatctc atagttttcc ttcttttgag 4860
aaaactgaag ccatggtatt ctgaggacta gagatgactc aacagagctg gtgaatctcc 4920
tcatatgcaa tccactgggc tcgatctgct tcaaattgct gatgcactgc tgctaaagct 4980
atacatttaa aacctcact aaaggatcag ggaccatcat ggaagaggag gaaacatgaa 5040
attgtaagag ccagattcgg ggggtagagt gtggaggtca gagcaactcc acctgaata 5100

FIG.5C



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agaaggtaaa gcaacctatc ctgaaagcta acctgccatg gtggcttctg attaacctct 5160
gttctaggaa gactgacagt ttgggtctgt gtcattgccc aaatctcatg ttaaattgta 5220
atccccagtg ttcggaggtg ggacttggtg gtaggtgatt cggtcatggg agtagatttt 5280
cttctttgtg gtgttacagt gatagtgagt gagttctctg gagatctggt catttaaaaag 5340
tgtgtggccc ctccccctcc tctcttggtc ctctactgc catgtaagat acctgctcct 5400
gctttgcctt ctaccataag taaaagcccc ctgaggcctc ccagaagca gatgccacca 5460
tgcttctgt acagcctgca gaaccatcag ccaattaaac ctcttttctg tataaattac 5520
cagtcttgag tatctcttta cagcagtgtg agaacggact aatacaaggg tctccaaaat 5580
tccaagtta tgtattcttt ctgccaaat agcaggtatt taccataaat cctgtcctta 5640
gggtcaaaca ccttgatggc atcgtacttc aattgtctta cacattcctt ctgaatgact 5700
cctccccat ggcatataag ccctgggtct tgggggataa tggcagaggg gtccaccatc 5760
ttgtctggt gccacctgag acacggacat ggcttctgtt ggtaagtctc tattaaatgt 5820
ttctttctaa gaaactggat ttgtcagctt gtttctttgg cctctcagct tctcagact 5880
ttggggtagg ttgcacaacc ctgcccacca cgaaacaaat gtttaatatg ataaatatgg 5940
atagatataa tccacataaa taaaagctct tggagggcc tcaataattg ttaagagtgt 6000
aaatgtgtcc aaagatggaa aatgtttgag aactactgtc ccagagattt tctgagttc 6060
tagagtgtgg gaatatagaa cctggagctt ggcttcttca gcctagaatc aggagtatgg 6120
ggctgaagtc tgaagcttgg cttcagcagt ttggggttgg ctccggagc acatatttga 6180
catgttgca ctgtgatttg gggtttggt tttgctctga atcctaattg ctgtccttga 6240
ggcatctaga atctgaaatc tgtggtcaga attctattat cttgagttag acatctccag 6300
tcttggttct gccttctagg gctggagtct gtagtcagt acccggtctg gcatttcaac 6360
ttcatataca gtgggctatc ttttggtcca tgtttcaacc aaacaaccga ataaaccatt 6420
agaaccttcc cccacttccc tagctgcaat gttaaacctt ggatttctgt ttaatagggt 6480
catatgaata atttcagcct gatccaaact tacattcctt ctaccgttat tctacacca 6540
ccttaaaaat gcattcccaa tatattcctt ggattctacc tatatatggt aatcctgggt 6600
ttgccagttt ctagtgcatt aacataacct atttacattc ttttacttta aagtggaaat 6660
aagagtcctt ctgcagagtt caggagttct caagatggcc cttacttctg acatcaattg 6720
agatttcaag ggagtcgcca agatcatcct caggttcagt gattgctggt agccctcata 6780

FIG.5D



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taactcaatg aaagctgtta tgctcatggc tatggtttat tacagcaaaa gaatagagat 6840
gaaaatctag caaggaaga gttgcatggg gcaaagacaa ggagagctcc aagtgcagag 6900
attcctgttg ttttctccca gtggtgtcat ggaaagcagt atcttctcca tacaatgatg 6960
tgtgataata ttcagtgtat tgccaatcag ggaactcaac tgagccttga ttatattgga 7020
gcttggttgc acagacatgt cgaccacctt catggctgaa ctttagtact tagccctcc 7080
agacgtctac agctgatagg ctgtaacca acattgtcac cataaatcac attgttagac 7140
tatccagtgt ggcccaagct cccgtgtaaa cacaggcact ctaaacaggc aggatatttc 7200
aaaagcttag agatgacctc ccaggagctg aatgcaaaga cctggcctct ttgggcaagg 7260
agaatccttt accgcacact ctccttcaca gggttattgt gaggatcaaa tgttggtcatg 7320
tgtgtgagac accagcacat gtctggctgt ggagagtgc ttctatgtgt gctaacattg 7380
ctgagtgcta agaaagtatt aggcattggc ttcagcactc acagatgctc atctaactct 7440
cacaacatgg ctacagggtg ggcactacta gcctcatttg acagaggaaa ggactgtgga 7500
taagaagggg gtgaccaata ggtcagagtc attctggatg caaggggctc cagaggacca 7560
tgattagaca ttgtctgcag agaaattatg gctggatgtc tctgccccgg aaagggggat 7620
gcactttcct tgaccccccta tctcagatct tgactttgag gttatctcag acttcctcta 7680
tgataccagg agcccatcat aatctctctg tgcctctcc ccttcctcag tcttactgcc 7740
cactcttccc agctccatct ccagctggcc aggtgtagcc acagtaccta actctttgca 7800
gagaactata aatgtgtatc ctacaggga gaaaaaaaaa aagaactctg aaagagctga 7860
cattttaccg acttgcaaac acataagcta acctgccagt tttgtgctgg tagaactcat 7920
gagactcctg ggtcagaggc aaaagatttt attaccaca gctaaggagg cagcatgaac 7980
tttgtgttca catttgttca ctttgcccc caattcatat gggatgatca gagcagttca 8040
ggtggatgga cacaggggtt tgtggcaaag gtgagcaacc taggcttaga aatcctcaat 8100
cttataagaa ggtactagca aacttgcca gtctttgtat ctgacggaga tattatcttt 8160
ataattgggt tgaaagcaga cctactctgg aggaacatat tgtatttatt gtctgaaca 8220
gtaaacaat ctgctgtaaa atagacgtta actttattat ctaaggcagt aagcaaacct 8280
agatctgaag gcgataccat cttgcaaggc tatctgctgt acaaatatgc ttgaaaagat 8340
ggtccagaaa agaaaacggt attattgcct ttgtcagaa gacacacaga aacataagag 8400
aaccatggaa aattgtctcc caacactgtt caccagagc cttccactct tgtctgcagg 8460
acagtcttaa catcccatca ttagtgtgtc taccacatct ggcttcaccg tgcccaacca 8520

FIG.5E



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agatttctag gtccagttcc ccaccatgtt tggcagtgcc ccactgccaa cccagaata 8580
agggagtgt cagaattccg aggggacatg ggtggggatc agaacttctg ggcttgagtg 8640
cagagggggc ccatactcct tggttccgaa ggaggaagag gctggagggtg aatgtccttg 8700
gaggggagga atgtgggttc tgaactctta aatccccaag ggaggagact ggtaagggtcc 8760
cagcttccga ggtactgacg tgggaatggc ctgagagggtc taagaatccc gtatcctcgg 8820
gaaggagggg ctgaaattgt gaggggttga gttgcagggg tttgttagct tgagactcct 8880
tggtgggtcc ctgggaagca aggactggaa ccattggctc cagggttttg tgtgaaggta 8940
atgggatctc ctgattctca aagggtcaga ggactgagag ttgcccatgc lttgatcttt 9000
ccatctactc cttactccac ttgagggtaa tcacctactc ttctagttcc acaagagtgc 9060
gcctgcgcga gtataatctg cacatgtgcc atgtcccagag gcctggggca tcatccactc 9120
atcattcagc atctgcgcta tgccggcgag gccggcgcca tgacgtcatg tagctgcgac 9180
tatccctgca gcgcgcctct cccgtcacgt cccaaccatg gagctgtgga cgtgcgtccc 9240
ctggtggatg tggcctgcgt ggtgccaggc cggggcctgg tgtccgataa agatcctaga 9300
accacaggaa accaggactg aaagggtgcta gagaatggcc atatgtcgct gtccatgaaa 9360
tctcaaggac ttctgggtgg agggcacagg agcctgaact tacgggtttg cccagttcca 9420
ctgtcctccc aagtgagtct cccagatacg aggactgtg ccagcatcag cttcatctgt 9480
accacatctt gtaacaggga ctaccagga ccctgatgaa caccatggtg tgtgcaggaa 9540
gagggggtga aggcattggac tcctgtgtgg tcagagccca gagggggcca tgacgggtgg 9600
ggaggaggct gtggactggc tcgagaagtg ggatgtggtt gtgtttgatt tcctttggcc 9660
agataaagtg ctggatatag cattgaaaac ggagtatgaa gaccagttag aatggagggt 9720
caggttgag ttgagttaca gatggggtaa aattctgctt cggatgagtt tggggattgg 9780
caatctaaag gtggtttggg atggcatggc tttgggatgg aaataggttt gtttttatgt 9840
tggctgggaa ggggtgtggg attgaattgg ggatgaagta ggtttagttt tggagataga 9900
atacatggag ctggctattg catgcgagga tgtgcattag tttggtttga tctttaaata 9960
aaggaggcta ttagggttgt cttgaattag attaatgtgt gttgggttga tgggttgggc 10020
ttgtgggtga tgtggttga ttgggctgtg ttaaattggt ttgggtcagg ttttggttga 10080
ggttatcatg gggatgagga tatgcttggg acatggaltc aggtggttct cattcaagct 10140
gaggcaaatt tcctttcaga cggtcattcc agggaacgag tggttgtgtg ggggaaatca 10200

FIG.5F



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ggccactggc tgtgaatata cctctatacct ggtcttgaat tgtgattata tatgtccatt 10260
ctgtctcctt cactgtactt ggaattgata tggtcattca gctggaaatg ggggaagatt 10320
ttgtcaaatt cttgagacac agctgggtct ggatcagcgt aagccttcct tctggtttta 10380
ttgaacagat gaaatcacat tttttttttt aaaatcacag aaatcttata gagttaacag 10440
tggactctta taataagagt taacaccagg actcttattc ttgattcttt tctgagacac 10500
caaaatgaga tttctcaatg ccaccctaata tctttttttt tttttttttt tttttgagac 10560
acagtctggg tcttttgctc tgtcactcag gctggagcgc agtgggtgtga tcatagctca 10620
ctgaaccctt gacctcctgg acttaaggga tctctctgct tcagcctcct gagtagatgg 10680
ggctacaggt gcttgccacc acacctggct aattaaattt tttttttttt tttgtagaga 10740
aagggtctca ctttggtgcc ctggctgata ttgaacttct gacttcaagt gattcttcag 10800
ccttggaact ccaaagcact gggattgctg gcatgagcca ctcaccgtgc ctggcttgca 10860
gcttaatctt ggagtgtata aacctggctc ctgatagcta gacatttcag tgagaaggag 10920
gcattggatt ttgcatgagg acaattctga cctaggaggg cagggtcaaca ggaatccccg 10980
ctgtacctgt acgttggtaca ggcattggaga atgaggagtg aggaggccgt accggaaccc 11040
catattgttt agtggacatt ggattttgaa ataataggga acttgggtctg ggagagtcatt 11100
atttctggat tggacaatat gtggtatcac aagggtttat gatgaggggag aaatgtatgt 11160
ggggaaccat tttctgagtg tggaagtga agaatacagag agtagctgaa tgccaacgct 11220
tctatttcag gaacatggta agttggaggt ccagctctcg ggctcagacg ggtataggga 11280
ccaggaagtc tcacaatccg atcattctga tatttcaggg catattaggt ttggggtgca 11340
aaggaagtac ttgggactta ggcacatgag actttgtatt gaaaatcaat gattggggct 11400
ggccgtggtg ctcacgctg taatctcact actttgggag accgaagtgg gaggatggct 11460
tgatctcaag agttggacac cagcctaggc aacatggcca gacctctct ctacaaaaaa 11520
attaataaatt agctggatgt ggtggtgcat gcttgtgggc tcagctatcc tggaggctga 11580
gacaggagaa tcggttgagt ctgggagttc aaggctacag ggagctgcga tcacgcccgt 11640
gcactccagc ctgggaaaca gagtgagact gtctcagaat ttttttaaaa aagaatcagt 11700
gatcatcca acccctgttg ctgttcaccc tgagcctgcc ttctctggct ttgttcctta 11760
gatcacatct ccatgatcca taggcctgc ccaatctgac ctcacaccgt gggaatgcct 11820
ccagactgat ctagtatgtg tggaacagca agtgcgtggc ctcctctccc ttccacagct 11880
ctgggtgtgg gagggggttg tccagcctcc agcagcatgg ggagggcctt ggtcagcatc 11940

FIG.5G



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taggtgcaa cagggcaagg gcggggtcct ggagaatgaa ggctttatag ggctcctcag 12000
ggaggccccc cagccccaaa ctgcaccacc tggccgtgga caccggt 12047

FIG.5H



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cgagcgggccc ctcagcttcg gcgcccagcc ccgcaaggct cccggtgacc actagagggc 60
gggaggagct cctggccagt ggtggagagt ggcaaggaag gaccctaggg ttcacgag 120
cccaggttta ctcccttaag tggaaatttc ttccccact cctccttggc tttctccaag 180
gaggggaaccc aggctgctgg aaagtccggc tggggcgggg actgtgggtt caggggagaa 240
cggggtgtgg aacgggacag ggagcgggta gaaggggtgg gctattccgg gaagtgggtg 300
ggggagggag cccaaaacta gcacctagtc cactcattat ccagccctct tatttctcgg 360
ccgctctgct tcagtggacc cggggagggc ggggaagtgg agtgggagac ctaggggtgg 420
gcttcccgac cttgctgtac aggacctga cctagctggc ttgtttccc atccccacgt 480
tagttgttgc cctgaggcta aaactagagc ccagggggccc caagttccag actgcccctc 540
ccccctcccc cggagccagg gagtgggttg tgaaaggggg aggccagctg gagaacaaac 600
gggtagtcag ggggttgagc gattagagcc cttgtaccct acccaggaat ggttggggag 660
gaggaggaag aggtaggagg taggggaggg ggcgggggtt tgtcacctgt cacctgctcg 720
ctgtgcctag ggcgggcggg cggggagtgg ggggaccggt ataaagcggg aggcgcctgt 780
gcccgtcca cctctcaagc agccagcgcc tgctgaatc tgttctgccc cctccccacc 840
catttcacca ccaccatg 858

FIG.6



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aagcttccac aagtgcattt agcctctcca gtattgctga tgaatccaca gttcagggtc 60
aatggcggtc aaaacttgat caaaaatgac cagactttat attcttacac caacatctat 120
ctgattggag gaatggataa tagtcatcat gtttaaacad ctaccattcc agttaagaaa 180
atatgatagc atcttggtct tagtcttttt cttaataggg acataaagcc cacaaataaa 240
aatatgcctg aagaatggga caggcattgg gcattgtcca tgcctagtaa agtactccaa 300
gaacctatct gtatactaga tgacacaatg tcaatgtctg tgtacaactg ccaactggga 360
tgcaagacac tgcccatgcc aatcatcctg aaaagcagct ataaaaagca ggaagctact 420
ctgcaccttg tcagtgaggt ccagatacct acag 454

FIG.7



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g atg acc ggc tca acc atc gcg ccc aca acg gac tat cgc aac acc act	49
Met Thr Gly Ser Thr Ile Ala Pro Thr Thr Asp Tyr Arg Asn Thr Thr	
1 5 10 15	
gct acc gga cta aca tct gcc cta aat tta ccc caa gtt cat gcc ttt	97
Ala Thr Gly Leu Thr Ser Ala Leu Asn Leu Pro Gln Val His Ala Phe	
20 25 30	
gtc aat gac tgg gcg agc ttg gac atg tgg tgg ttt tcc ata gcg ctt	145
Val Asn Asp Trp Ala Ser Leu Asp Met Trp Trp Phe Ser Ile Ala Leu	
35 40 45	
atg ttt gtt tgc ctt att att atg tgg ctt att tgt tgc cta aag cgc	193
Met Phe Val Cys Leu Ile Ile Met Trp Leu Ile Cys Cys Leu Lys Arg	
50 55 60	
aga cgc gcc aga ccc ccc atc tat agg cct atc att gtg ctc aac cca	241
Arg Arg Ala Arg Pro Pro Ile Tyr Arg Pro Ile Ile Val Leu Asn Pro	
65 70 75 80	
cac aat gaa aaa att cat aga ttg gac ggt ctg aaa cca tgt tct ctt	289
His Asn Glu Lys Ile His Arg Leu Asp Gly Leu Lys Pro Cys Ser Leu	
85 90 95	
ctt tta cag tat gat taa	307
Leu Leu Gln Tyr Asp	
100	

FIG.8